

Claims

1. A buttonhole sewing machine, comprising

- a base plate (2), a top arm (1) and a standard (3) uniting the arm (1) and the base plate (2);
- a needle (6) movable in up and down reciprocation;
- at least one work piece clamp (9a, 9b) displaceable in a y direction;
- a buttonhole cutting device (13),
 - which is disposed downstream of the work piece clamp (9a, 9b) seen from the needle (6) in the y direction,
 - which has a knife (36) that is disposed on the base plate (2), having a straight cutting edge (37) that extends in the y direction and an eye cutting edge (38) on one end,
 - a cutting block (15) which cooperates with the knife (36), and
 - a cutting drive (16) for displacement of the cutting block (15) in a vertical z direction towards the knife (36);

characterized

in that the knife (36) and the cutting block (15) are motor-adjustable one relative to the other in the y direction.

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2. A buttonhole sewing machine according to claim 1, **characterized in that** the knife (36) comprises an eye cutting edge (38, 39 at each end of the straight cutting edge (37).

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3. A buttonhole sewing machine according to claim 2, **characterized in that** the length L37 of the straight cutting edge (37) in the y direction equals or exceeds the length L15 of the cutting block (15).

4. A buttonhole sewing machine according to claim 1, **characterized in that** the cutting block (15) is motor-adjustable in the y direction.
5. A buttonhole sewing machine according to claim 1, **characterized in that** a cutting-block positioning device (24) is provided for adjustment of the cutting block (15) in the y direction, the cutting block (15) being disposed thereon for displacement in the z direction.
6. A buttonhole sewing machine according to claim 5, **characterized in that** the cutting-block positioning device (24) comprises a horizontal cutting-block slide (25);
in that the horizontal cutting-block slide (25) is displaceable in the y direction by means of a servomotor (30); and
in that the cutting block (15) is disposed on the horizontal cutting block slide (25) for displacement in the z direction.
7. A buttonhole sewing machine according to claim 6, **characterized in that** the cutting block (15) is disposed on a vertical cutting-block slide (34) which is guided on the horizontal cutting-block slide (25) for displacement in the z direction.
8. A buttonhole sewing machine according to claim 7, **characterized in that** the cutting drive (16) acts on the vertical cutting-block slide (25) by a y sliding connection.
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9. A buttonhole sewing machine according to claim 1, **characterized in that** the knife (36) and the cutting block (15) are adjustable in parallel to each other.

10. A buttonhole sewing machine according to claim 1, **characterized in that** the knife (36) is pivotably adjustable about an axis (68) that extends in an x direction perpendicular to the y direction and to the z direction.
- 5 11. A buttonhole sewing machine according to claim 2, **characterized in that** the knife (36) is fixed to a seating plate (62) which is supported by way of a pivot bearing in the base plate (2) and the pivoted position of which is adjustable and fixable by means of a set screw (77).
- 10 12. A buttonhole sewing machine according to claim 3, **characterized in that** the pivot bearing is formed by a bearing bolt (69) which rests on the base plate (2) and on which the seating plate (62) rests by an adapted bearing face (72).